

BOSTON UNIVERSITY GEOMETRY SEMINAR

Logarithmic trace and orbifold products.

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Monday, April 26, 3-4 pm in MCS 135
Tea 2:45-3 in MCS 153

Abstract: A variant on a classical question about eigenvalues of sums of Hermitian matrices is the following: What are the possible eigenvalues for a collection of unitary matrices whose product is the identity? I will explain how a fundamental inequality (proved by Falbel and Wentworth) for the logarithms of eigenvalues of unitary matrices can be used to define an operation on vector bundles called the logarithmic restriction. This allows us to show, without reference to orbicurves, that a certain K-theory class defined by Jarvis, Kaufmann and Kimura is canonically represented by a vector bundle. In turn this allows us to give a purely equivariant definition of orbifold products for quotient Deligne-Mumford stacks.

This talk is based on joint work with Tyler Jarvis and Takashi Kimura.